

mode when said pattern is transferred onto the divided area depending on the surface condition of the divided area determined by the determining step; and

transferring the pattern formed on the mask onto the divided area while performing said focusing control in the decided mode and while synchronously moving said mask and said substrate.

3. (Amended) The scanning exposure method according to claim 2, wherein said first control mode performs a tilt control to change substrate tilt in a direction of said synchronous moving of said substrate, and said second control mode maintains unchanged substrate tilt in the direction of the synchronous moving of the substrate.

4. (Amended) The scanning exposure method according to claim 3, wherein said surface condition of said divided area is represented as a spatial frequency distribution along said synchronous moving direction of said substrate in respect to convex and concave changes along an optical axis direction of said projection optical system in a repeating unit area of the pattern to be transferred, the repeating unit area being within the divided area; and

a shape of said illumination area is represented as a slit width of said illumination area in the synchronous moving direction of the substrate.

5. (Amended) The scanning exposure method according to claim 4, wherein said substrate is controlled by using said focusing control in said first mode when a predominant wavelength is equal to or longer than a length corresponding to said slit width, the predominant wavelength corresponding to a predominant frequency that has a maximum amplitude in said spatial frequency distribution; and

said substrate is controlled by using said focusing control in said second mode when a predominant wavelength is shorter than the length corresponding to the slit width.

6. (Amended) The scanning exposure method according to claim 5, wherein said length corresponding to said slit width is the slit width.

7. (Amended) The scanning exposure method according to claim 1, wherein said surface condition of the divided area is determined prior to said transfer of said pattern on said mask onto the divided area.

8. (Amended) The scanning exposure method according to claim 7, wherein said surface condition of the divided area is determined in every lot of said substrate on which said pattern formed on said mask is transferred prior to said transfer of the pattern.

9. (Amended) The scanning exposure method according to claim 7, wherein said surface condition of said divided area is determined in every exposure process of said transfer of said pattern formed on said mask onto said substrate prior to said transfer of the pattern.

10. (Amended) The scanning exposure method according to claim 7, wherein a plurality of divided areas are arranged on said substrate; and said surface condition of said divided area is determined by determining the surface condition of one of the plurality of divided areas.

11. (Amended) The scanning exposure method according to claim 1, wherein a focusing control is provided that includes a focus position control that controls a position of said substrate in an optical axis direction of said projection optical system; and when it is decided that said focus position control cannot be performed, following said synchronous moving, a control is performed to maintain said substrate at a position just prior to the decision in an optical axis direction of said projection optical system.

12. (Once Amended) The scanning exposure method according to claim 1, wherein a focusing control is provided that includes a tilt control of said substrate in said

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synchronous moving direction; and

when it is decided that said tilt control cannot be performed, following said synchronous moving, a control is performed to maintain a tilt of the substrate just prior to the decision in said synchronous moving direction.

13. (Amended) The scanning exposure method according to claim 1, wherein a focusing control is provided that includes a tilt control of said substrate in a direction perpendicular to said synchronous moving direction and an optical axis direction of said projection optical system; and

when it is decided that said tilt control cannot be performed, following said synchronous moving, a control is performed to maintain a tilt of the substrate just prior to the decision in said direction perpendicular to said synchronous moving direction and said optical axis direction of said projection optical system.

14. (Amended) A scanning exposure method for exposing a substrate while moving the substrate in a predetermined direction relative to an exposure beam that passes through a projection optical system, and detecting a position information of said substrate surface in an optical axis direction of the projection optical system, said scanning exposure method comprising:

measuring information based on convex and concave changes of said substrate surface while moving the substrate in the predetermined direction in a condition that the substrate is not exposed; and

deciding whether a tilt of the substrate in the predetermined direction is adjusted or not during exposure of the substrate based on said information based on convex and concave changes.

15. (Amended) The scanning exposure method according to claim 14, wherein

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deciding whether a tilt of the substrate in the predetermined direction is adjusted or not during the exposure of the substrate is done so that a deterioration in positioning accuracy of an image plane of said projection system and said substrate surface is prevented.

23. (Amended) A making method of a scanning exposure apparatus that transfers a pattern formed on a mask onto a divided area on a substrate through a projection optical system, while moving said mask and said substrate synchronously, said making method comprising:

providing a mask stage that holds said mask;

providing a substrate stage that holds the substrate;

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providing a first detecting system that detects a position in an optical axis direction of said projection optical system of at least one detection point within an illumination area on a surface of said substrate;

providing a first driving system that drives the mask stage and the substrate stage in a plane perpendicular to said optical axis direction;

providing a second driving system that drives the substrate stage to at least one of the optical axis direction and a tilt direction;

providing a memory unit that stores data representing a surface condition of said divided area; and

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providing a control system that obtains a surface condition of ^{*the*} ~~the~~ divided area, decides a focusing control mode to be used when transferring said pattern onto said divided area as being either a first focusing control mode or a second focusing control mode based on the obtained data representing the surface condition of the divided area, and performs said decided focusing control mode by controlling the second driving system based on a detection result from the first detecting system, while synchronously moving the mask stage and the

substrate stage by controlling the first driving system, wherein the first focusing control mode performs a tilt control of the substrate while said pattern is transferred onto the divided area and the second focusing control mode maintains a tilt of the substrate while said pattern is transferred onto the divided area.

24. (Amended) The making method according to claim 23, further comprising:

providing a second detecting system that detects a tilt of said substrate stage in said synchronous moving direction and in a direction perpendicular to said synchronous moving direction, in respect to a virtual plane perpendicular to said optical axis direction of said projection optical system.

25. (Amended) The making method according to claim 24, further comprising:

providing a calculating operation unit that acquires detection result data from said first detecting system during said synchronous moving under a focusing control that maintains a surface of said substrate stage to be substantially parallel to said virtual plane based on a detection result from said second detecting system, and obtains said surface condition of said divided area based on said detection result data.

30. (Amended) A device manufacturing method including a lithographic process, comprising:

a predetermined pattern is transferred onto a divided area, which is divided by street lines on a substrate, by using said method according to any one of claims 1 to 15, and 26.